

Remarks

Claims 23-26, 28-33, 35, 37, and 38 are presented for examination. Claims 1-22 were previously cancelled. Claims 23, 28, 29, 30 32, and 33 have been amended to more clearly recite the invention. Claims 27, 34 and 36 have been cancelled. No new matter has been added. Support for the amendments can be found in paragraphs 42 and 47 of the specification.

Turning now to the Office Action, Claims 23-26, 28-33, 35, 37 and 38 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Nedic. The Examiner admits that Nedic does not show that the flange be of a tapered shape as claimed by Applicants. The Examiner fails to cite another reference that discloses this claimed feature missing from Nedic but contends that the flange shape and arrangement of Nedic operate in substantially the same manner with substantially the same results as applicants' flange shape and arrangement. Applicants respectfully disagree with this contention and have amended the claims to more clearly define the invention.

Claim 23 as currently amended contains the limitation of a clamping assembly comprising:

an annular ring disposed over the flange and having a surface engaging the tapered flange of the second end of the tubular member, and a clamping plate for fastening to the casting mold and for biasing the annular ring against the flange when the clamping plate is fastened to the casting mold; wherein a dimension of the annular ring is such that when the clamping plate is biased against the annular ring, a pre-load gap is formed between the clamping plate and the casting mold and the annular ring applies a substantially constant and substantially uniform compressive load against the flange irrespective of the temperature of the clamping assembly.

First, in addition to not teaching a tapered flange, Nedic does not disclose or teach, inter alia, the limitation “the annular ring applies a constant and substantially uniform compressive load against the flange irrespective of the temperature of the clamping assembly.”

Also, the clamping assembly as claimed in amended Claim 23 functions in a substantially different manner with a substantially different result than the clamping assembly taught by Nedic.

In the clamping assembly as claimed by Applicants the annular ring is constantly biased against the flange when the casting plate is fastened to the casting mold such that the annular ring applies a substantially constant and substantially uniform compressive load against the flange, irrespective of the temperature of the clamping assembly.

In contrast, Nedic’s clamping assembly comprises a stiff collar mounting system, which applies increasing pressure as the temperature of the system rises. In column 4, line 50 – column 5, line 4. Nedic states,

“the heat transfer from the mold to the lock assembly 50 causes the lock assembly 50 to expand along the longitudinal axis of the fill tube 52 toward the gaskets 70 and 72, which increases the surface pressure on the gaskets 70 and 72. The thermal expansion reduces the possibility that air will gain entry into the mold cavity or that the molten material will escape the fill tube 52, and allows the lower ring 10 to remain attached to the upper ring 26”.

Hence the pressure or compressive load applied by the clamping assembly of Nedic, and accordingly the performance of Nedic’s clamping assembly, varies according to the temperature of the assembly and is not substantially constant. Nedic’s temperature sensitive clamping assembly is in sharp contrast to the clamping assembly claimed by Applicants wherein the annular ring applies a substantially constant and substantially uniform compressive load against the flange irrespective of the temperature of the clamping assembly. That the performance of the clamping assembly of Nedic is sensitive

to variations in temperature is true regardless of whether gaskets are included in Nedic's clamping assembly or not.

Hence, not only does Nedic fail to disclose all of the elements of Applicants invention but the clamping assembly of Nedic functions in a substantially different manner with substantially different results.

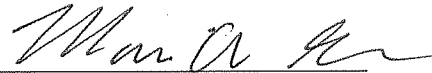
Therefore, independent Claim 23 and Claims 24-26 and 28-32 dependent thereon are patentable over Nedic. Independent Claim 33 and Claims 35, 37 and 38 dependent thereon are also patentable over Nedic for at least the same reasons as Claim 23. Allowance of Claims 23-26, 28-33, 35, 37 and 38 is respectfully requested.

In light of the amendments to independent Claims 23 and 33, Applicants do not believe that comparative evidence presented in a declaration is necessary to overcome Nedic. If the Examiner still feels that such evidence is necessary, he is invited to contact the undersigned.

Should matters remain which the Examiner believes could be resolved in a telephone interview, the Examiner is requested to telephone the Applicant's undersigned attorney. Alternatively, since it is believed that the claims of the present application are in condition for allowance, the Examiner is respectfully requested to issue a Notice of Allowance at the Examiner's earliest convenience.

The Commissioner is hereby authorized to charge any required fee in connection with the submission of this paper to Account No. 50-1561.

Respectfully submitted,



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